

A DIASPINE WITH LEGS (HOMOPTERA: COCCIDAE).BY GLADYS HOKE, *Converse College, Spartanburg, S. C.*

The specimens from which this species has been described are, so far as is known, the first adult female diaspsines on which legs have been recognized. They were received by Mr. J. Forrest Crawford at the University of Chicago, from the Botanist at the American University of Beirut, Syria, and were sent to the Bureau of Entomology, U. S. D. A., for identification. Mr. Harold Morrison of the Bureau very kindly extended to me the privilege of describing the species.

***Leucaspis knemion*, new species.**

Female puparium.—Color white, of normal form, consisting of the brownish larval and nymphal pellicles covered with a white waxy coat a trifle larger than the nymphal pellicle which shows slightly through the wax; entire scale 2 to 4 mm. long (figs. 2, 3).

Immature female.—Larval pellicle light to dark brown in color, with well developed legs and antennae. Nymph with three pairs of rudimentary legs, marginal fringe and ceratubae extending cephalad to a point beyond the meso-legs. Nymphal pellicle (figs. 1, 5) heavily chitinized, dark brown in color; body finely perforated in mosaic-like pattern with the exception of a small area on anterior margin; segmentation of abdomen distinctly indicated on dorsum, less distinctly on venter; rostrum nearer to anus than anus is to posterior margin of pygidium; legs in normal position on venter; lobes, marginal fringe and ceratubae as in figures, occasionally with slight variations.

Male puparium.—Color white, 1.5 to 2 mm. long, larval pellicle light brown.

Adult female.—Body enclosed within nymphal pellicle; twice as long as broad, cephalic end as broad or broader than caudal end, broadest across thorax; rudimentary antenna consisting of prominent tubercle bearing 5 conspicuous setae, a seta on the derm in close proximity to tubercle; tentorium well developed, of medium size; ventral surface with two groups of about 50–60 ceratubae caudad and laterad of the tentorium, thorax bearing 3 pairs of conspicuous rudimentary legs, prolegs between anterior spiracles and tentorium, mesolegs about midway between anterior and posterior spiracles, metalegs caudad of posterior spiracles, and nearer to them than are the mesolegs; a group of 4–15 cerores cephalad of anterior spiracles. No cerores associated with posterior spiracles; ventral derm finely marked with irregular bands of tiny scallop-like protrusions on meson between tentorium and pygidium; each of the two abdominal segments anterior to the pygidium bearing near each lateral margin a group of accessory genacerores numbering 4–9, rarely with one of the anterior groups missing or with a few ceratubae associated with the cerores (fig. 4).

Pygidium.—Lobes in 2 pairs, heavily chitinized, bluntly pointed and tapering to distal end, one to two pairs of less heavily chitinized lobe-like processes on each laterus; plates slightly longer than median pair of lobes and slender, entirely fringing margin of pygidium and numbering about 70–100, frequently with one or two distinct pectinations, 2 pairs of plates between median pair of lobes and two or three between median pair and second pair of lobes; a long seta associated with each median lobe on dorsal surface, 5 pairs of well developed

marginal setae on ventral surface; genacerores in crescentic formation, numbering 14-20 (19-34), 12-18, with 3-3 or rarely 2-0 a short distance caudolaterad of last group, mesal group sometimes fused with one of the groups on either side, a group of 4-8 accessory genacerores on each side cephalolaterad of the anterior group; ceratubae arranged in a band conforming to margin and numbering about 100; dorsal surface with irregular oblong patches of denser chitin, usually 10 in number, which may or may not be associated with ceratubae; anal aperture surrounded by an area more highly chitinized than the adjacent derm; vulva nearer to caudal margin than is anus (fig. 7).

Host.—*Pinus pinca*.

Locality.—Beirut, Syria: April 18, 1923.

Types.—In the U. S. National Collection of Coccidae. Two slide mounts from the type material were sent to Mr. E. E. Green, for an opinion regarding the correctness of the interpretation of the ventral thoracic spine-like structures as legs. Slide mounts of two larval pellicles, one nymph, five nymphal pellicles, and five adult females were examined.

This species can be distinguished from *L. pini* Hartig, apparently its nearest relative, by the presence of 3 pairs of rudimentary legs in the nymph, nymphal pellicle and adult female, by the presence of 3 pairs of groups of accessory genacerores, by the greater number of plates on the pygidium, by the absence of cerores associated with the posterior spiracles, and by the greater proximity of the rostrum of the nymphal pellicle to the posterior margin of the pygidium. In the nymphal pellicle the distance between the anus and the rostrum is less than the distance between the anus and the posterior margin of the pygidium, while in *pini* the distance of the rostrum from the anus is from 2 to 2½ times as great as the distance from the anus to the posterior margin. There is also a difference in the number and arrangement of the ceratubae on the pygidium and a difference in the pygidial and lateral fringe.

Some of the distinctive characteristics of *knemion* and the following species of *Leucaspis* which occur on *Pinus* are indicated in the chart. Types were not available for study in making these comparisons and all of the data concerning the species that are marked with a star were taken from published descriptions and figures of these species.

EXPLANATION OF PLATE I.

Leucaspis knemion, new species.

Fig. 1. Pellicle of nymph, × 21.

Fig. 2. Dorsal aspect of puparium.

Fig. 3. Ventral aspect of puparium.

Fig. 4. Adult female, × 48.

Fig. 5. Pygidium of nymphal pellicle, × 96.

Fig. 6. Mesothoracic leg of adult female, × 424.

Fig. 7. Pygidium of adult female, × 184: D. Dorsal aspect, V. Ventral aspect.

COMPARATIVE CHART SHOWING CHARACTERS

SPECIES	GENA- CERORES	ACCESSORY GENACERORES	LOBES
<i>knemion</i>	14-20 19-34 (12-18) + (3-0)	3 paired groups: 4-8 on pygidium, 4-9 on each of the 2 segments immediately anterior to pygidium	2 pairs and 1-2 pairs of lobelets
<i>pini</i> Hartig	11-13 15-17 10-12	2 paired groups of 2-4 on the 2 segments immediately anterior to pygidium	3 pairs and 1 pair of lobelets
<i>pusilla</i> Loew	9 10-11 10-6	0	1 pair and 1 pair of lobelets
<i>perezi</i> Green*	single arch of 30-45	0	3 pairs narrow
<i>signoreti</i> Targ.*	18 21-22 24-25 — 11 20-17 10-9	9 — 6 on the 2 segments immediately ante- rior to pygidium, 5 — 3 on third segment anterior to pygidium	3 pairs short
<i>india- orientalis</i> Lindg.*	0		0
<i>loewi</i> Colvée	16 14-10 13-15	0	3 pairs and 2 pairs of lobe-like protru- sions

OF LEUCASPIS SPECIES ON PINUS.

PLATES	ANTERIOR SPIRACERORES	POSTERIOR SPIRACERORES	LEGS	ROSTRUM OF NYMPHAL PELLICLE
70-100 slightly longer than lobes	4-15	0	3 pairs rudimentary	slightly nearer to anus than anus is to posterior margin
about 42 much longer than lobes	9-11	2-3	0	twice as far from anus as anus is from posterior margin
occasionally fused, at least twice as long as lobes	5-6	0	0	twice as far from anus as anus is from posterior margin
26-32 twice as long as lobes	5-6			just below center of body
62 much longer than lobes				
	0	0	0	
			0	